

**Cancer Center Support Grant – CCSG 2017**

“Immune biomarkers of response to BTK inhibitors in HNSCC patients”

**UC San Diego**  

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**MOORES CANCER CENTER**

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**SCIENTIFIC ABSTRACT**

The immunotherapeutic agent nivolumab (anti-PD-1) recently demonstrated single agent activity in recurrent/metastatic head and neck squamous cell carcinoma (HNSCC). However, the one-year survival and response rates were only 36% and 13%, respectively. Improved therapeutic approaches that target immune escape from anti-PD-1 could hold promise for this disease. We recently identified a switch directed by PI3K $\alpha$  and its downstream effector BTK that allows tumor-associated macrophages to promote immune escape from checkpoint inhibitors. In this proposal, we will evaluate whether novel immune-related biomarkers can be used to monitor therapeutic responses to BTK inhibitors in HNSCC patients.